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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/642,732	08/19/2003	Yoshinori Kojima	00684.003512	3815
5514	7590	02/28/2005	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			VO, ANH T N	
			ART UNIT	PAPER NUMBER
			2861	

DATE MAILED: 02/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/642,732

Applicant(s)

KOJIMA ET AL.

Examiner

Anh T.N. Vo

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4/14/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

The references cited on PTO 1449 have been considered.

### ***Drawings Object to***

The drawings are objected to in that Figures 13-14 should be labeled as --Prior Art--. Correction is required.

### ***Claim Objection***

Claim 3 is objected to in that "3" on line 1 should be changed to --2--. Correction is required.

### ***Specification***

The specification has been checked to the extent necessary to determine the presence of all possible minor errors. However, the applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

***CLAIM REJECTIONS***

***Claim Rejections - 35 U.S.C. § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-7 are rejected under 35 U.S.C. 102 (e) as being anticipated by Watanabe et al. (US 6,361,136).

Note: The method steps are inherently taught in the apparatus device/limitations in the rejections as follow:

Watanabe et al disclose in Figures 1, 4, 9A-9B, 22A-23B and 24A an ink detection system for use in a liquid jet printing apparatus comprising:

- a reflection member (180) provided in a liquid containing portion (7) and having a plurality of roof mirror assemblies (191a) arranged in a predetermined direction, each of said roof mirror assemblies having at least two reflecting surfaces (180A, 180B) positioned with a predetermined angle therebetween; wherein said reflection member is effective to divide incident light, which is scattering light, into a plurality of light beams (15) by said plurality of roof mirror assemblies (191a) and to condense at a predetermined position the beams sequentially reflected by the at least two reflecting surfaces of the roof mirror assemblies, and wherein an amount of the liquid

Art Unit: 2861

in said liquid container is detected on the basis of the light reflected by said reflection member (Figures 17, 22A, and 23A-23B);

- wherein said reflection member (180) is provided on an inner surface (191) of said liquid containing portion (7) (Figures 17 and 22A);
- wherein said reflection member (180) is provided on a surface relating to a height of said liquid container (7) (Figure 17);
- a carriage (2) for carrying said liquid container (7); and detecting means (14) for detecting an amount of the liquid in said liquid container on the basis of the light;
- wherein said detecting means (14) includes a light emitting source (15) and a photoreceptor (16) (Figure 1); and
- wherein said light emitting source (15) and said photoreceptor (16) are integral with each other (Figure 1)

Claims 1-7 are rejected under 35 U.S.C. 102 (b) as being anticipated by Walker (US Pat. 6,274,880).

Note: The method steps are inherently taught in the apparatus device/limitations in the rejections as follow:

Walker discloses in Figures 1-5 an ink jet printer comprising:

- a reflection member (117) provided in a liquid containing portion (203) and having a plurality of roof mirror assemblies arranged in a predetermined direction, each of said roof mirror assemblies having at least two reflecting surfaces (230, 231) positioned with a predetermined angle therebetween; wherein said reflection member is effective to divide incident light, which is scattering light, into a plurality of light beams (108) by said plurality of roof mirror assemblies and to condense at a predetermined position the beams sequentially reflected by the at least two reflecting surfaces (230, 231) of the roof mirror assemblies, and wherein an amount of the liquid in said liquid container is detected on the basis of the light reflected by said reflection member (117) (Figure 2);

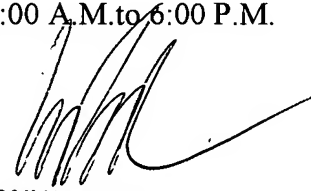
- wherein said reflection member (117) is provided on an inner surface of said liquid containing portion (203) (Figure 2);
- wherein said reflection member (117) is provided on a surface relating to a height of said liquid container (203) (Figure 2);
- a carriage (not shown or 501) for carrying said liquid container (101) (Figure 5);
- detecting means (107) for detecting an amount of the liquid in said liquid container (101) on the basis of the light;
- wherein said detecting means (107) includes a light emitting source (108) and a photoreceptor (109) (Figure 2); and
- wherein said light emitting source (108) and said photoreceptor (109) are integral with each other (Figures 2 and 4).

***Citation of Pertinent Prior Art***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. These prior art references (US Pat. 4,246,489; US Pat. 5,997,121; US Pat. 6,024,428; US Pat. 6,454,400) cited in the PTO 892 form show an ink cartridge and a liquid level detector which are deemed to be relevant to the present invention. These references should be reviewed.

***CONCLUSION***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Anh Vo. whose telephone number is (571) 272-2262. The examiner can normally be reached on Tuesday to Friday from 8:00 A.M. to 6:00 P.M. The fax number of this Group 2861 is (703) 872-9306.

  
**ANH T.N. VO**  
**PRIMARY EXAMINER**

February 23, 2005